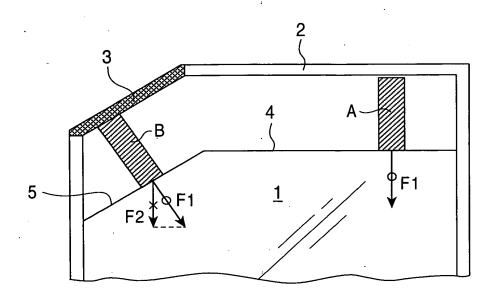
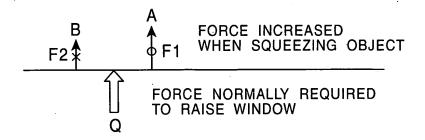
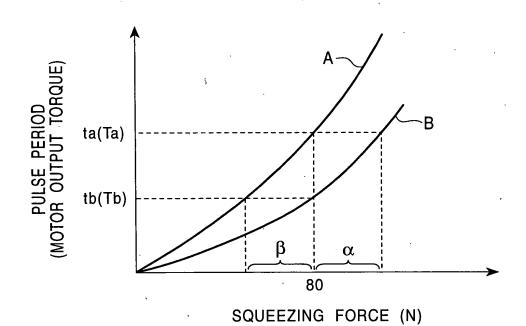
FIG. 1





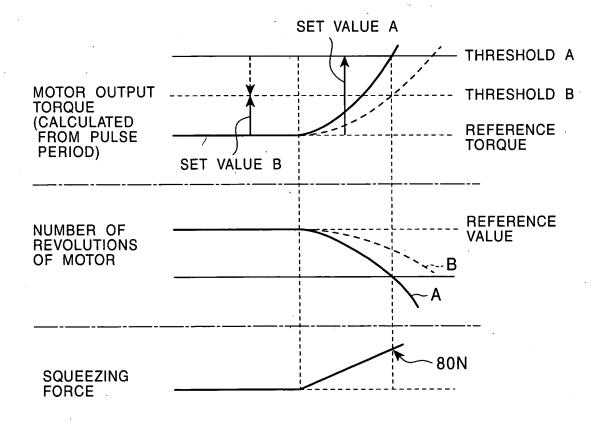
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FIG. 2



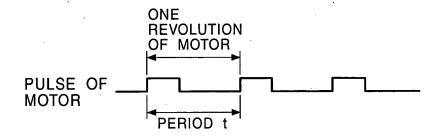
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FIG. 3



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## FIG. 4A



## FIG. 4B

$$\tau = \frac{Kt}{Rm} (V-Ke \cdot 1/t)-Tm$$
$$= Kt I-Tm$$

1/t: PULSE FREQUENCY

Kt, Rm, Ke, Tm: CONSTANT OF MOTOR